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| EXAMINER |
|---|
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/810,791 | HWANG ET AL. |
| | Examiner | Art Unit | |
| | Chandrahas Patel | 2416 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>15 January 2009</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-3,5-15 and 18-22</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-3, 5-15, 18-22</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1.     A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection.  Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114.  Applicant's submission filed on 1/15/2009 has been entered.

### *Claim Rejections - 35 USC § 103*

2.     The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

3.     Claim 1, 2, 5, 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radulovic

(USPN 7,215,663) in view of Huddle (USPN 6,950,407).

     **Regarding claim 1**, Radulovic teaches a system comprising: a plurality of real-time

routing servers to route and process multimedia communication sessions over a network **[Fig. 1,**

**70, 60, Col. 8, lines 21-23]**, wherein each of the real-time routing servers includes a plurality of

processors configured to process media data **[Col. 14, lines 28-60, processes media data when**

**calls are placed to carry out conferencing services]** and each of the real-time routing servers is

configurable to be a transit only real-time routing server or a general transit real-time routing

server and wherein the general transit real-time routing server transfers the media data and also

processes the media data using at least one of the processors **[Col. 14, lines 38-47, servers**

**process and pass conference call data]**; a group server to manage the multimedia

communication sessions over the network, wherein the group server is associated with the

plurality of routing servers **[Fig. 1, 40 is coupled to plurality of servers 70, 60 via network
120]**; a plurality of end-point processing devices to schedule and conduct multimedia
communication sessions over the network, wherein each end-point processing devices is
associated with at least one routing server and the group server **[Fig. 1, 50, Col. 14, lines 18-27,
each CE 50 is associated with routing server 70 and group server 40 via network 120]**.

However, Radulovic does not teach the transit only real-time routing server transfers the
media data without processing the media data.

Huddle teaches the transit only real-time routing server transfers the media data without
processing the media data **[Col. 16, lines 30-35]**.

It would have been obvious to one of ordinary skill in the art at the time the invention
was made to have real-time routing server operate in transit mode broaden the audience of
providers that may interconnect with each other **[Col. 16, lines 26-27]**.

**Regarding claim 2**, Radulovic teaches the network is an IP network [**Col. 14, lines 16-
18**], wherein each of the routing server, the group server, and the plurality of end-point
processing devices have a separate IP address for identification **[Col. 15, lines 55-59]**.

**Regarding claim 5**, Radulovic teaches and end-point processing device comprises a
personal computer operated by a user **[Col. 12, lines 36-39]**.

**Regarding claim 6**, Radulovic teaches and end-point processing device comprises a
dedicated hardware device **[Col. 12, lines 36-39]**.


4.     Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Radulovic (USPN
7,215,663) in view of Huddle (USPN 6,950,407) and Akhtar (USPN 6,418,139).

**Regarding claim 3**, the references teach the system as discussed in rejection of claim 1.

However, the references do not teach the real-time routing server includes dynamic route processing circuitry to dynamically determine a shortest delay path.

Akhtar teaches the dynamic route processing circuitry to dynamically determine a shortest delay path **[Col. 6, lines 13-18]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include circuitry to dynamically determine a shortest delay path so that when routes change new routes can be calculated dynamically **[Col. 3, lines 46-48]**.

5.      Claims 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radulovic (USPN 7,215,663) in view of Matsubara (USPN 7,215,640).

**Regarding claim 7**, Radulovic teaches a method for determining a topology of a network, comprising: obtaining from a group server respective addresses for a plurality of real-time routing servers to route and process multimedia communication sessions over the network **[Col. 8, lines 42-45, resource allocation table will require the knowledge of IP addresses since it's a IP based network]**.

However, Radulovic does not teach setting a static neighbor configuration including one of more of the real-time routing servers; determining a dynamic neighbor configuration including one or more of the real-time routing servers other than the real-time routing servers included in the static neighbor configuration, the real-time routing servers being selected for inclusion in the dynamic neighbor configuration based on quality of service levels for respective paths between the real-time routing servers, hop counts along the paths, delays between the real-time routing

servers, bandwidth capacity between the real-time routing servers, and common path traffic between the real-time routing servers.

Matsubara teaches setting a static neighbor configuration including one of more of the real-time routing servers [**Col. 10, lines 10-33, sets static paths between the nodes**]; determining a dynamic neighbor configuration including one or more of the real-time routing servers other than the real-time routing servers included in the static neighbor configuration [**Col. 10, lines 34-48, dynamic paths are set up when the external devices logon to the network while the static neighbor configuration set up before does not change**], the real-time routing servers being selected for inclusion in the dynamic neighbor configuration based on quality of service levels for respective paths between the real-time routing servers, hop counts along the paths, delays between the real-time routing servers, bandwidth capacity between the real-time routing servers, and common path traffic between the real-time routing servers [**Col. 5, lines 42-64**].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine a neighbor configuration dynamically so that when location of the terminals changes the path could be changed automatically which occurs frequently in the network [**Col. 2, lines 63-66**].

**Regarding claim 8**, Radulovic further teaches forming a routing table based on neighbor information [**Col. 15, lines 49-51**].

**Regarding claim 9**, Radulovic further teaches determining the dynamic neighbor configuration based on a network administration policy [**Col. 15, lines 49-51**].

**Regarding claim 10**, Radulovic further teaches a dynamic neighbor configuration is repeated when a new real-time routing server is added to network **[Col. 11, lines 59-67 – Col. 12, lines 1-5]**.

**Regarding claim 11**, Matsubara teaches obtaining information regarding quality of service levels for respective paths between real-time routing servers, hop counts along paths, delays between real-time routing servers, bandwidth capacity between real-time routing servers, and common path traffic between real-time routing servers **[Col. 5, lines 42-54]**; rejecting all paths not meeting a quality of service requirement **[Fig. 5, 184]**; sorting candidate real-time routing servers according to distance measurements, including hop counts along paths **[Col. 11, lines 51-57]**; determining whether there is path between a first real-time routing server and a candidate real-time routing server **[Fig. 5, Flow chart determines if path exits or not]**; determining whether a delay between the first real-time routing server and the candidate real-time routing server is less than a maximum delay **[Col. 1, lines 36-40]**; determining whether a bandwidth capacity between the first real-time routing server and the candidate real-time routing server is greater than a minimum bandwidth capacity **[Col. 1, lines 36-40]**; determining whether the candidate real-time routing server shares a common path with neighbor real-time routing server **[Col. 1, lines 46-51]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine dynamic neighbor configuration based on above parameters so that high-bandwidth and real-time transfer of data can be done efficiently **[Col. 1, lines 34-36]**.

**Regarding claim 12**, Matsubara teaches the operations of determining whether there is a path, whether a delay is less than a maximum delay, whether a bandwidth capacity is greater than

a minimum bandwidth capacity, and whether a common path is shared are repeated for each

candidate real-time routing server **[Col. 10, lines 53-67 – Col. 11, lines 1-12]**.

      It would have been obvious to one of ordinary skill in the art at the time the invention

was made to repeat above steps when a new server connects to network so that QoS of the path

can be satisfied **[Col. 10, lines 53-55]**.

      **Regarding claim 13**, Radulovic further teaches the network is an IP network **[Col. 14,

lines 16-18]**.


6.      Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matsubara (USPN 7,215,640) in view of Matsunuma (USPN 7,363,230).

      **Regarding claim 14**, Matsubara teaches a method for reserving bandwidth and media

processing resources **[Fig. 5]**, comprising: checking whether resources for video processing and

included in a source real-time routing server, are sufficient for a user to join a multimedia

communication session in order for the user to communicate with all users participating in the

multimedia communication session **[Fig. 5, 156, Col. 5, lines 30-64, if sufficient network

resources are available user will be able to communicate with all nodes once admitted, Col.

4, lines 29-32 describe resources are used for video processing]**; for the multimedia

communication session involving multiple real-time routing servers, sending reservation requests

from the source real-time routing server to all destination real-time routing servers **[Col. 5, lines

42-54]**; checking for notifications of successful bandwidth reservations for paths from the source

real-time routing server to destination real-time routing servers **[Fig. 5, 176, Col. 5, lines 65-67,

Col. 6, lines 1-4]**; checking for notification of successful resource reservations from destination

real-time routing servers **[Fig. 5, 176]**, wherein if the notifications of successful bandwidth

reservations and successful resource reservations are not received with a preset time period, then

the notifications are not considered to have been received **[Col. 7, lines 8-21, only certain**

**numbers of attempts are made within a time period. Notifications are sent after step 182.**

**Bandwidth reservation is made in step 180 where bandwidth is being reallocated on one or**

**more links. Media processing resource reservation is made as QoS paths are being set up**

**and any processing is processing media since the claim does not describe what is meant by**

**media processing]**.

       However, Matsubara does not teach the resources are digital signal processor (DSP)

resources and the DSP resource reservations indicating availability of DSP resources, included in

the destination real-time routing servers, for video processing of data transferred during the

multimedia communication session.

       Matsunuma teaches the resources are digital signal processor (DSP) resources and the

DSP resource reservations indicating availability of DSP resources, included in the destination

real-time routing servers, for processing of data transferred during the multimedia

communication session **[Fig. 9B, s23, Col. 12, lines 7-16, checks if DSP are free to process**

**data]**.

       It would have been obvious to one of ordinary skill in the art at the time the invention

was made to check if DSP resources are free to process data so that it could be determined

whether the data can be encoded before being passed to other nodes **[Col. 12, lines 7-21]**.

**Regarding claim 15**, Matsubara teaches the source real-time routing server checks for

the notifications of successful bandwidth reservations and media processing resources **[Col. 5,**

**lines 65-67, Col. 6, lines 1-9]**.

7.      Claims 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsubara

(USPN 7,215,640) in view of Kurose et al. (USPN 7,076,540) and Cohen et al. (USPN

7,299,349).

**Regarding claim 18**, Matsubara teaches a method for reserving bandwidth in a network

**[Fig. 5]** comprising: receiving at a first real-time routing server a bandwidth reservation request

from an upstream real-time routing server **[Fig. 5, 152, Col. 6, lines 42-49]**; determining whether

at least one downstream path to a destination real-time routing server has enough bandwidth

**[Fig. 5, 156, Col. 6, lines 50-53]**; if the first real-time routing server is a destination only real-

time routing server or a destination and transit real-time routing server, then reserving bandwidth

for a path between the first real-time routing server, and the upstream neighbor real-time routing

server **[Col. 11, lines 34-43]**.

However, Matsubara does not teach if the first real-time routing server is a transit real-

time routing server and not a destination real-time routing server, then forwarding the bandwidth

reservation request to a downstream neighbor real-time routing server that has enough bandwidth

and leaving a usage count unchanged; if the first real-time routing server is not only a transit

real-time routing server but also a destination real-time routing server, then forwarding the

bandwidth reservation request to a downstream neighbor real-time routing server that has enough

bandwidth and incrementing the usage count by one, wherein the first real-time routing server

concurrently functions as a transit server to transfer media data not needing processing and a

destination server to process media data needing processing.

Kurose teaches if the first real-time routing server is a transit real-time routing server and

not a destination real-time routing server, then forwarding the bandwidth reservation request to a

downstream neighbor real-time routing server that has enough bandwidth and leaving a usage

count unchanged **[Col. 8, lines 53-61]**; if the first real-time routing server is not only a transit

real-time routing server but also a destination real-time routing server, then forwarding the

bandwidth reservation request to a downstream neighbor real-time routing server that has enough

bandwidth and incrementing the usage count by one **[Fig. 4, 58, if the bandwidth reservation**

**cannot be done at first router 70 than the request comes to second routing server 50, Col. 8,**

**lines 53-61]**.  Cohen teaches the first real-time routing server concurrently functions as a transit

server to transfer media data not needing processing and a destination server to process media

data needing processing **[Col. 8, lines 29-45]**.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to forward the bandwidth reservation request since RSVP-incompatible router cannot

service the request **[Col. 7, lines 50-56]** and use a transit server to transfer data not needing

processing so that encrypted messages can be transferred and security can be provided **[Col. 8,**

**lines 29-45]**.

**Regarding claims 19, 22,** Kurose teaches if a bandwidth reservation request is forwarded

to a downstream neighbor real-time routing server, then checking for notification of a successful

bandwidth reservation for a path from the first real- time routing server to the downstream

neighbor real-time routing server **[Col. 9, lines 39-42]**.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to check if a bandwidth request was successful so that policy server can recognize that

reservation was made for a bandwidth **[Col. 10, lines 1-3]**.

**Regarding claim 20**, Matsubara teaches a method for reserving bandwidth in a network

[**Fig. 5**] comprising: receiving at a first real-time routing server a bandwidth reservation request

from an upstream real-time routing server **[Fig. 5, 152, Col. 6, lines 42-49]**; determining whether

at least one downstream path to a destination real-time routing server has enough bandwidth

**[Fig. 5, 156, Col. 6, lines 50-53]**; selecting an upstream neighbor real-time routing server from

upstream neighbor real-time routing servers sending a bandwidth reservation request within a

predetermined time period **[Col. 6, lines 50-53, after the first-hop reserves bandwidth it is

selected and its Flow-Path Table is searched]**; if the first real-time routing server is a

destination only real-time routing server or a destination and transit real-time routing server, then

reserving bandwidth for a path between the first real-time routing server, and the upstream

neighbor real-time routing server **[Col. 11, lines 34-43]**.

However, Matsubara does not teach if the first real-time routing server is a transit real-

time routing server and not a destination real-time routing server, then forwarding the bandwidth

reservation request to a downstream neighbor real-time routing server that has enough bandwidth

and leaving a usage count unchanged; if the first real-time routing server is not only a transit

real-time routing server but also a destination real-time routing server, then forwarding the

bandwidth reservation request to a downstream neighbor real-time routing server that has enough

bandwidth and incrementing the usage counting by one, wherein the first real-time routing server

concurrently functions as a transit server to transfer media data not needing processing and a

destination server to process media data needing processing.

Kurose teaches if the first real-time routing server is a transit real-time routing server and

not a destination real-time routing server, then forwarding the bandwidth reservation request to a

downstream neighbor real-time routing server that has enough bandwidth and leaving a usage

count unchanged **[Col. 8, lines 53-61]**; if the first real-time routing server is not only a transit

real-time routing server but also a destination real-time routing server, then forwarding the

bandwidth reservation request to a downstream neighbor real-time routing server that has enough

bandwidth and incrementing the usage counting by one **[Fig. 4, 58]**. Cohen teaches the first real-

time routing server concurrently functions as a transit server to transfer media data not needing

processing and a destination server to process media data needing processing **[Col. 8, lines 29-

45]**.

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to forward the bandwidth reservation request since RSVP-incompatible router cannot

service the request **[Col. 7, lines 50-56]** and use a transit server to transfer data not needing

processing so that encrypted messages can be transferred and security can be provided **[Col. 8,

lines 29-45]**.

**Regarding claim 21**, Matsubara further teaches if only one of the upstream neighbor

real-time routing servers sending bandwidth reservation requests within the predetermined time

period has a maximum usage count, then selecting that upstream neighbor real-time routing

server **[Col. 6, lines 50-53, after the first-hop reserves bandwidth it is selected and its Flow-

Path Table is searched]**; if two or more of the upstream neighbor real-time routing servers

sending bandwidth reservation requests within the predetermined time period have the maximum

usage count, than selecting an upstream neighbor real-time routing server with an earliest arrival

time for the bandwidth reservation request **[Col. 12, lines 17-28]**.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Chandrahas Patel whose telephone number is (571)270-1211.

The examiner can normally be reached on Monday through Thursday 7:30 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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